54TH ANNUAL CONVENTION

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AUGUST 18-21, 2011

ABSTRACTS OF PRESENTED PAPERS

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INTRODUCTION

On behalf of everyone in the Convention Committee I would like to welcome you to the 2011 Parapsychological Association Convention. This being the first time the PA Convention is held outside of Europe and North America, it represents an exciting and unique opportunity for us to meet in a country with both a thriving academic parapsychological community and a rich tradition of practices which can directly inform and inspire modern parapsychological research. It is an additional privilege that this year's PA Convention coincides with UNIBEM's 7th Psi Meeting and the 6th Journey to Altered States, which I hope you will take the opportunity to participate in and explore.

The Convention starts on Thursday evening after the end of the 7th Psi Meeting with a reception kindly hosted by UNIBEM, during which the Portuguese edition of the book *Varieties of Anomalous Experiences: Examining the Scientific Evidence* will be launched with an invited address from one of the authors, Etzel Cardeña. On Friday morning Wellington Zangari will be opening the Convention with his invited address, *Psi Research in Brazil: New Horizons*. During the next three days we will have a total of thirteen full paper presentations, five research briefs, three posters, two panel discussion and five invited addresses on a rich and diverse variety of topics which comprise an amalgamation of the current thinking and active research in parapsychology in the world today. The program content particularly reflects parapsychological interests and research work in Brazil, which today has the largest number of PA members and affiliates outside of Europe and the US. I am looking forward to meeting our colleagues from Brazil and the South Americas, many of whom we know by name but have never met face-to-face, and to sharing our thoughts, experiences and findings with each other and hopefully cross-pollinating our respective fields with fresh ideas. I am sure the next few days will be a fruitful adventure for us all and I look forward to taking this journey with you.

Our Arrangements Chair, Fábio Eduardo da Silva and his assistant local organisers have made tremendous efforts to arrange it so that the three events run seamlessly with each other, and for this they deserve much praise and appreciation, as also for their hard work in the challenging task of organizing the venues, simultaneous translation and catering for the convention. Many thanks are due to the Program Committee members for their time and effort in reviewing and providing valuable feedback on submissions, and to all the authors who contributed their work. I am ever grateful to the session chairs for their help in making it all run smoothly. I am delighted and honoured to have so many distinguished invited speakers accepting our invitations, including John Alexander, Michael Winkelman who will be our Banquet speaker, Carlos Alvarado who is last year's Outstanding Career Contribution Award winner, and Stanley Krippner who will be receiving this year's award; I thank them all for coming and contributing to the convention. Many thanks and much gratitude goes to the Convention Committee team and especially to Fábio Eduardo da Silva, Annalisa Ventola and David Luke for working so hard to bring this together.

Marios Kittenis

Program of Events

Thursday 18th August

Registration desk open		16:00-19:00
Unibem Reception to PA Convention		19:20-21:20
Invited Address:		
Altered consciousness is a many splendored thing	*Etzel Cardeña*	

Friday 19th August

Registration desk open		8:00 – 17.00
Welcoming remarks		9:00
Session One: Altered States I		
Psi research in Brazil: New horizons	*Wellington Zangari*	9:15
Working the graveyard shift at the witching hour: Further exploration of dreams, psi and circadian rhythms	*David Luke & Karolina Zychowicz*	10:00
Coffee break		***10.30-11:00***
Session Two: Altered States II		
Hypnotizability, alterations in consciousness, and other variables as predictors of performance in a ganzfeld psi task	*David Marcusson-Clavertz & Etzel Cardeña*	11:00
Preliminary study of the relationship between local geomagnetic activity, Tibetan Buddhist meditation and psychic awareness	*Serena Roney-Dougal, Adrian Ryan & David Luke*	11:30
Two trials of a free-response ESP test in two groups of hypnotic susceptibility low/high scores: A pilot study	*Alejandro Parra & Juan Carlos Argibay*	12:00
Lunch break		***12.30-14.00***
Session Three: Poster Session		
		14:00
The effects of audience size: A field RNG experiment in ballparks in Japan	*Takeshi Shimizu, Masato Ishikawa & Tatsu Hirukawa*	
Anomalous physiological responses to local and remote emotive stimulation	*Edward Modestino, Edward Kelly, Ross Dunseath, James Lenz, Frank Applin & Allison Knee*	

Anomalous anticipatory event-related EEG activity in a face recognition memory task	*Marios Kittenis*	

Session Four: Altered States Panel

Chair: David Luke

Panel: Ayahuasca and exceptional human experiences	*Stanley Krippner, Luis Luna, Michael Winkelman, Ede Frecksa & David Luke*	14:30

Coffee break ***16:00-16:30***

Session Five: Awards & Invited Talk by 2010 Outstanding Contribution Award winner

Parapsychological Association Awards Ceremony	*David Luke*	16:30
Distorting the past	*Carlos Alvarado*	16:45

Dinner Break ***17:30-19:00***

Presidential Address and Reception	*David Luke*	19:00-21:00

Saturday 20th August

Registration desk open 8:00 – 17.00

Session One: Theoretical

Testing the theory of morphic resonance using recognition for Chinese symbols: A failure to replicate	*Chris Roe & Glenn Hitchman*	9:00
Global consciousness: Fact or fancy?	*Roger Nelson*	9:30
Reporting an exploratory group experience in psi training	*Fabio Eduardo da Silva*	10:00

Coffee break ***10:30-11:00***

Session Two: Mediumship & Survival

Exploring different personality traits with psychic claimants	*Alejandro Parra*	11:00
"It's like a recording on a wonky tape": understanding spiritualist mental mediumship using interpretative phenomenological analysis	*Elizabeth Roxburgh*	11:20
Persistence of "past-life" memories in adults in Lebanon who in their childhood claimed memories of a past life	*Erlendur Haraldsson & Majd Abu-Izzedin*	11:50

Group photo		***12:20-12:30***
Lunch break		***12:30-14:00***
Session Three: Clinical		
An investigation into the prevalence and phenomenology of synchronicity experiences in the clinical setting	*Elizabeth Roxburgh*	14:00
Session Four: Mediumship Panel		
Chair: Carlos S. Alvarado		
Future directions in the study of mental mediumship	*Carlos S. Alvarado, Everton Maraldi, Alexander Moreira-Almeida, Elizabeth Roxburgh, Chris Roe & Wellington Zangari*	14:20
Coffee break		***16:00-16:30***
Session Five: Invited Talk		
A cross-cultural review of applications of phenomena	*John Alexander*	16:30
Free time		***17:30-20:00***
Banquet		***20:00-20:30***
Banquet address:		
Evolved psychology and the deep structure of psi: The shamanic paradigm	*Michael Winkelman*	

Sunday 21st August

Session One: Apparitions

Analysis of a case collection of black dog apparition reports	*Simon Sherwood*	9:00
Ghost hunting groups in the USA and in Germany: A cross-cultural comparison	*Gerhard Mayer*	9:30
An investigation of ghostly phenomena and the characteristics of people who have and have not had such an experience	*Simon Sherwood*	9:50
Coffee break		***10:10-10:40***

Session Two: Individual Differences

A re-examination of non-intentional precognition with openness to experience, creativity, psi beliefs and luck beliefs as predictors of success	*Glenn Hitchman,Chris Roe & Simon Sherwood*	10:40
Lability, paranormal beliefs and psychokinetic experiences: Development of a lability scale using an online survey-based study	*Sophie Louise Drennan, Chris Roe & Richard Broughton*	11:10

Session Three: Psychophysiology

Physiological markers of future outcomes: Three experiments on subconscious psi perception during concurrent performance of a guessing task	*Julia Mossbridge, Marcia Grabowecky & Satoru Suzuki*	11:30
Biophysical approach to spatial distribution of healing (bio-PK) power around a human body	*Hideyuki Kokubo, Osamu Takagi & Yasuyuki Nemoto*	12:00
		12.30

Closing Remarks

PA Business Meeting 13:00-14:00

ABSTRACTS

Full Papers

REPORTING AN EXPLORATORY GROUP EXPERIENCE IN PSI TRAINING

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The exploratory group experience in psi training reported herein was carried out from March 2008 to December 2009, totalling 68 sessions of 2 hours each. Fourteen participants took part in the *Grupos Experimentais de Vivências para Autoconsciência* [Experimental Groups in Self-consciousness Experiences] in this period, but only seven carried out formal tests for psi, which is the criterion for inclusion in this study. These groups aim to stimulate: a) systematic self-perception (training in self-observation), b) so-called psi-conducive factors (with an emphasis on creativity and ASCs), c) interpersonal/emotional development, and d) utilisation of psi in tests and daily routines (decision-making, troubleshooting and personal guidance). Several techniques were used in the psi-training (e.g. remote viewing, telepathy drawings, clairvoyance using images) and two techniques were used to evaluate the official psi-scores: a) In Chinese Clairvoyance (Chi), participants try to guess figures inside a small, soft piece of paper (e.g. 3x3 cm) folded in a special way to hide the target information. During the test, the folded paper is placed in one of the ears of the participant, who tries to ascertain the hidden data. After receiving some mental information about the target, the participant registers this information (drawings and notes) in a specific form. Then he takes the paper out of his ear and checks the result, adding it to the same form. The targets are pasted in rectangles in the upper part of the form, in the order in which they are used; the drawings and notes are registered in rectangles in the bottom part of the form in an order that is determined randomly. This allows evaluation by independent judges, who match up blindly each target with two drawings by the participants. One drawing is indicated first and if it corresponds to the target, a first-rank hit is marked. The other drawing is set in second place. Hits counted in both first and second places are called total hits. b) Brazilian Clairvoyance (Br), inspired by the first technique, is very similar. The main difference is that the targets are small printed images, doubly hidden in opaque envelopes. Direct and total hits are also taken into consideration in this technique. Three sets of tests were conducted in each technique (Chi1, Chi2, Chi3, Br1, Br2 and Br3), totalling 3,008 trials. In the Chi1 tests (n=448) the direct hits were significant (p=0.04, π =0.43), while the total hits were not. The Chi2 (n=560) tests did not generate hits at a significant level. Chi3 (n = 560) indicated significant results only for direct hits (p=0.0028, π =0.56). The Br results (n=320, 520 and 600, respectively) for direct hits were significant (Br1, p=0.0003, π =0.63; Br2, p=0.000002, π =0.63; Br3, p=0.0012, π =0.57) and partially significant for total hits (Br1, p=n.s.; Br2, p=0.00005, π =0.77; Br3, p=0.0018, π =0.73). Based on these data and on the individual scores of the participants, one prediction was rejected: **a) "**that some of the participants could improve their psi-development beyond the mean chance expectancy, maintaining it this way for at least the period during which they remain in the groups"; and another was confirmed **b) "**that the group as a whole could show signs of improvement in the psi-scores".

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PERSISTENCE OF "PAST-LIFE' MEMORIES IN ADULTS IN LEBANON WHO IN THEIR CHILDHOOD CLAIMED MEMORIES OF A PAST LIFE

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ABSTRACT

There has been much uncertainty about how frequent it is that children, who claim past life memories, retain them into adult life, how much of their memories they retain and to what extent such memories disappear or get distorted with time. Twenty eight grown-ups aged 28 to 56 years were interviewed in Lebanon about their present memories of the alleged past life. Stevenson had interviewed them as they were children and then they spoke of memories of a past life. 24 reported that they still have some memories whereas 4 had forgotten everything. Twenty-one were sure that their present memories were a continuation of their childhood memories whereas three were not sure about the origins of the memories, like them existing because their family had talked much about them. In an earlier study in Sri Lanka only about a third of the grown-ups had retained some of their memories. It was most common to remember people they had know and how they had died in the previous life. All groups remembered much fewer statements now than when they were children. For those who were sure that they were still remembering some of their childhood memories, the mean number of remembered statements fell from 30 items in childhood to four in their grown-up life. Of the statements now remembered only a little of a half of them had been mentioned when a child. This opens up the question of distortion of memories with time although part of this may be due to insufficient interviewing of them as children or that they did not report all that they remembered at that time. These individuals were leading normal active life and seem to have reached an educational level higher than the average in Lebanon. There was no indication that their past-life experiences had had detrimental effects on their development into adulthood.

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A RE-EXAMINATION OF NON-INTENTIONAL PRECOGNITION WITH OPENNESS TO EXPERIENCE, CREATIVITY, PSI BELIEFS AND LUCK BELIEFS AS PREDICTORS OF SUCCESS

Glenn A. M. Hitchman, Chris A. Roe & Simon J. Sherwood
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The notion that psi may be able to function without conscious intent to mediate adaptive outcomes is a predominant feature of several theories of psi. In particular, Stanford's 'Psi-mediated Instrumental Response' (PMIR) model predicts that psi can operate in the absence of conscious awareness, facilitating advantageous outcomes for the organism by triggering pre-existing behaviours in response to opportunities or threats in the environment. To test some assumptions of this model, Luke and colleagues carried out 4 studies involving a 10-trial computer based protocol in which participants were asked to indicate their preferred images from sets of four geometric patterns. Unbeknown to the participants, this constituted an implicit, forced-choice precognition task as after they had made each preferential choices, the computer randomly selected one of the four images as a target. In contingent conditions, participants whose hit rate at the end of the 10 trials exceeded the mean chance expectation were directed towards a positive outcome task of rating erotic or cartoon images, whereas those who scored below the MCE took part in a negative outcome task consisting of a boring number vigilance activity. Taken together, the four studies yielded highly significant evidence of an implicit precognition effect. However, participants in non-contingent conditions, who were allowed to leave the experiment early rather than take part in a contingent outcome task, performed marginally better than those in contingent conditions. This raised questions over the assumptions of the PMIR model and called for further testing.

The present study therefore attempted to clarify this issue by refining the experimental design and using a more carefully composed contingent reward task structure using images from the International Affective Picture System. The number of trials per participant was increased from 10 to 15 to increase statistical power, whereas all other design elements remained consistent with the original studies. Fifty participants completed a battery of questionnaires and a 15-trial computer-based implicit psi task with a graded positive or negative contingent reward outcome task. The results showed that participants scored more hits on the tacit precognition task than would be expected by chance but the extent of the outperformance was not statistically significant (mean hit rate = 4.02, MCE = 3.75, $t[49] = 1.14$, $p = 0.13$, one tailed). Interestingly, participants were shown to perform almost exactly at chance levels over the final 5 trials which had been added for the present study. With regards to individual difference correlates of psi task performance, a significant positive correlation was found between participants' hits on the implicit precognition task and their scores on Goldberg's measure of openness to experience ($r = .29$, $p = .02$), used here as an experimental proxy for latent inhibition, a factor hypothesised to diminish an organism's receptivity to psi stimuli. However, correlations between psi score and beliefs about luck, psi, paranormal phenomena and creativity were all found to be non-significant. These findings are interpreted in terms of their support for Stanford's PMIR model.

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BIOPHYSICAL APPROACH TO SPATIAL DISTRIBUTION OF HEALING (BIO-PK) POWER AROUND A HUMAN BODY

Hideyuki Kokubo[1,2], Osamu Takagi[1] & Yasuyuki Nemoto[1]
[1] Institute for Living Body Measurements, International Research Institute Chiba, Japan[2] Institute for Informatics of Consciousness, Meiji University Tokyo, Japan

[Purpose] Using a gas measurement method in which pieces of cucumbers (Cucumis sativus 'white spine type') were used as bio-sensors, we executed precision measurements of spatial distribution of controlled healing power around healers (within 2.5m).
[Participants] Participants were 5 volunteer-healers and 2 Chinese psychic-healers.
[Method] Measurements were done using our gas measurement method (which was presented at 53rd PA Convention in 2010). Each participant did two 30-minute trials of non-contact healing for the target bio-sensors in front of them (healing measurement). They tried to increase odor of cucumbers. At that time, their spatial distributions of their healing power were measured at 25 or 50 cm intervals in the front-backward and right-leftward directions from the participants (potential measurement). Control samples were kept at another room (distance: 12m). After trials, all sample dishes were set into separated containers and the containers were kept at 24 degree of Celsius. 24h after, gas (odor) concentration of each container was measured with a short-term gas-measuring detector tube for ethyl acetate (141L, Gastec). And J value, the natural logarithm of the ratio of gas concentration of experimental and control samples, was calculated as an index of controlled healing power.
[Results] In healing measurements, psychic healers showed significant J value (average J = 0.111, n = 4, p = 0.017, two tails, t-test) and volunteers showed significant J value (average J = 0.l24, n = 10, p = 0.003, one tail, t-test). In potential measurements, the spatial distribution of J values around the healer was a wave-like distribution which wave-length was about 1.5m. Healing (bio-PK) phenomenon has non-Coulomb potential. The potential distribution was symmetric obviously in right-left direction of psychic healers. Results of volunteer healers, there was a tendency that healing power was concentrated at the center if the healer succeeded to control their power, and healing power was spread to outside if they missed to control their power.
[Discussion] The wave-like potential distribution means a layer structure. The wave-like potential supports partially an empirical claim that there is an invisible layer structure of so-called bio-energy field around a human body. Also, the wave-like potential has reverse areas of potential distribution. It suggests necessity of revision of the spatial arrangement of experiments. Moreover, potential measurements showed a possibility to discuss approximated or fundamental equations of healing phenomenon. [Conclusion] A wave-like potential distribution was generated around a human body during a healing task. This potential distribution partially supports an empirical claim that a human body is surrounded by an invisible layer-structure.

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WORKING THE GRAVEYARD SHIFT AT THE WITCHING HOUR: FURTHER EXPLORATION OF DREAMS, PSI AND CIRCADIAN RHYTHMS

David Luke[1] & Karolina Zychowicz[2]
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Research and theory suggests that the chemicals made in the pineal gland (e.g., melatonin, pinoline, and possibly DMT) follow a circadian rhythm and may be important in the processes of sleeping and dreaming. These nocturnal chemicals may also be important in the mediation of spontaneous mystical and visionary states and in the mediation of psi, particularly given that 33-68% of spontaneous cases of ESP are reported to occur during dreams (Van de Castle, 1977). One such pineal chemical, melatonin, is known to fluctuate in quantity considerably during the night. Nevertheless very little research has been conducted to test whether peak melatonin periods (e.g., 3am) are more conducive to psi than lower melatonin periods (e.g., 8am), although the two studies that have been conducted have found positive effects (Luke *et al*., 2010; Satyanarayana, Rao & Vijayalakshmi, 1993). The present study tested for dream precognition among 20 participants on ten separate nights each, with trials both during the night and first thing in the morning. A free-response dream precognition task was used, with participants viewing four clips after dreaming and ranking them for similarity to the dream. After ranking, the target was selected randomly by computer.

Previous research had found a significant improvement in dream precognition scores at 3am compared to 8am (Luke *et al*., 2010) and scores in the same direction were found in the present study, but the results were non-significant, t (19) = -.57, p = .58 two-tailed. Overall target ranking (psi score) was in the predicted direction but also non-significant, t (19) = -1.13, p = .27 two-tailed, r = .25, but still surpassing previous post-Maimonides dream precognition studies in effect size (Sherwood & Roe, 2003). Dream bizarreness, supposedly mediated by melatonin, was actually higher at 8am than at 3am, though again, non-significant, t(265) = -.581, p = .56 two-tailed. Despite failing to support the three prospective hypotheses, a number of exploratory analyses found significant positive correlations between dream psi task performance and several salient variables: age, r (19) = .49, p = .028 two-tailed, Sheep-Goat score, r_s (19) = .46, p = .042 two-tailed, and mean dream word recall, r (267) = .13, p = .038 two-tailed. These findings were tentatively interpreted as indicating the necessity for recruiting motivated participants, especially when recruiting from an undergraduate student population, because issues of maturity, belief and attentiveness appear important. Furthermore, a larger sample size, at the expense of fewer trials per person, would likely provide a better pay-off on psi and individual differences correlations for the same number of trials.

Finally, a lack of evidence for the salience of dream bizarreness in dream precognition test performance invites the possibility that melatonin may still play a mediating role in psi, albeit a weak one, though melatonin's supposed role in dream bizarreness is seriously questioned. In order to further pursue the role of pineal gland chemistry in the mediation of dream psi it is recommended, where funding permits, that melatonin and DMT assays are utilised to track the intra- and inter-individual differences in the levels of these chemicals within the body so that they are better mapped to the processes of sleep, dream and psi.

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HYPNOTIZABILITY, ALTERATIONS IN CONSCIOUSNESS, AND OTHER VARIABLES AS PREDICTORS OF PERFORMANCE IN A GANZFELD PSI TASK[1]

Etzel Cardeña & David Marcusson-Clavertz

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We examined how hypnotizability, dissociation, alterations in consciousness, belief in success, and previous psi experiences related to performance in a ganzfeld psi task. High (n = 14) and low (n = 12) hypnotizables participated in two sessions. The first one included measures of dissociation and alterations in consciousness during ganzfeld, while the second consisted of a telepathy task with the percipient again in a ganzfeld setting. We hypothesized that high hypnotizability (perhaps interacting with dissociation), alterations in consciousness, expecting a successful psi performance, and previous psi experiences would predict successful psi performance. Percipients' belief of their own success in the experiment ($r = .57$, $p < .05$) and their reports of previous psi experiences ($r = .61$, $p < .05$) correlated significantly with psi z-scores, but contrary to our hypothesis hypnotizability overall correlated negatively with performance on the psi task. However, psi z-scores correlated strongly to moderately with experiencing an altered state ($r = .74$, $p = .002$) and experiencing altered perception ($r = .65$, $p = .01$) and altered time sense ($r = .60$, $p = .02$), but only for high hypnotizables. Although we did not find an overall interaction between hypnotizability and dissociation, we observed that at least a subgroup of high dissociative high hypnotizables seemed to be accurate when they followed their "hunches" rather than their imagery. Besides replicating previous results on the relationship between psi performance and belief in own success and prior psi experience, our results may be the clearest indicator of a link between experiencing an altered state of consciousness and success in psi tasks, but only but a select group, namely the high hypnotizables.

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PHYSIOLOGICAL MARKERS OF FUTURE OUTCOMES:

THREE EXPERIMENTS ON SUBCONSCIOUS PSI PERCEPTION DURING CONCURRENT PERFORMANCE OF A GUESSING TASK

Julia Mossbridge, Marcia Grabowecky, & Satoru Suzuki
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Physiological responses to arousing (vs. calm) stimuli arriving 3-7 seconds in the future have been described in peer-reviewed journals using five different physiological measures in at least four different laboratories. However, only a handful of these have used tasks in which participants must perform conscious guessing at targets. In order to eventually improve performance at intuitive guessing, understanding the mechanisms of physiological presentiment effects during the performance of behavioral guessing tasks is critical.

To address this gap in knowledge, we performed three experiments. Our hypothesis for all three experiments was that two measures of autonomic state, heart pulse period or inter-beat-interval (IBI) and skin conductance (SC), would both show distinct and significantly different patterns associated with future correct vs. incorrect guesses in a guessing task. In the first two experiments we show that at the group level, significant differences in heart period are observed, such that IBI is higher preceding a correct guess than an incorrect guess. However, at least at the group level, there was no SC difference associated with correctness or incorrectness of a future guess in either of the two experiments. The third experiment found no significant anticipatory effects. Finally, an exploratory analysis comparing data from all females to all males across the four experiments showed that while at the group level SC was not responsive to correctness of future guesses in any experiment, a robust sex difference in SC anticipatory responses exists, in which males have increased skin conductance preceding correct vs. incorrect guesses, while females show the reverse pattern.

None of the significant effects in any of the experiments or the post-hoc sex difference analysis could be explained by expectation bias. Reasons for the lack of a significant effect in the third experiment are discussed. Overall, the results support the hypothesis.

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GLOBAL CONSCIOUSNESS: FACT OR FANCY?

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This is an introduction to the Global Consciousness Project (GCP) and what we have learned during more than a decade of focused research. Briefly stated, we find a correlation between the behavior of random sources and human consciousness on a global scale. There is a highly significant effect on the GCP instrument during special times we identify as "global events" which bring great numbers of people to share thoughts and emotions. The effect is a tiny deviation from what's expected, but the patient replication of tests has gradually created very strong statistical support for the reality of this subtle correlation of human consciousness with deviations in random data. The GCP instrument is a network of physical random number generators (RNGs, also called REGs) spread around the world. There are currently about 65 or 70 nodes in the network, and at each one, random data trials (each the sum of 200 random bits) are recorded continuously, one trial per second, day after day. We now have a 13-year database of synchronized parallel sequences of random numbers. The data are archived on a server in Princeton, and subjected to formal analyses testing the hypothesis that there will be departures from expected randomness in correspondence with global events. We do find a small correlation, and the compounded probability that the deviation is merely chance fluctuation is about 1 in 10 billion ($p \sim 2x10\text{-}10$), an impressive bottom line statistic composed of small effects accumulated in more than 345 tests. The correlation is subtle, and individual event results are typically too weak to be reliably interpreted, but we are able to combine results across replications to overcome a very small signal to noise ratio. Real effects gradually accumulate, while unstructured noise is self-canceling.

The GCP effects are not seen primarily as deviations of the individual RNGs, but as an increase in the average correlation between pairs of RNGs separated by distances up to thousands of kilometers. This means that although the direct effects are too small for us to detect, they occur in synchrony and this leads to detectable changes in the network as a whole. The RNGs are independent and widely separated, and should not show any relationship at all. But during moments of importance to humans, the devices show slight correlations with each other. This is a fact that does not fit readily into scientific models, so understandably it is a result that remains to be accepted. The findings challenge status quo physics and psychology, but modeling and explaining the effects should help place mind and consciousness in more broadly competent models of the world. There are multiple measures of structure in the data. A second, orthogonal correlation measure complements the primary measure. A significant spatial effect appears, though not in the measure of distance between event and the REGs. Rather, analysis shows that the correlation between pairs of REGs slowly weakens as a function of their separation. There is also a characteristic temporal structure. On average, it takes 30 minutes to an hour for effects be established, and they persist for a few hours. This suggests that a "moment" in global consciousness may be somewhat like a moment in individual consciousness, but with a time scale that is vastly different.

The GCP results seem also to be influenced by factors that are familiar from human psychology. For example, the effects are larger in proportion to the importance of the events we examine, and they are larger if the level of emotional involvement is high. We see stronger effects when events embody or evoke deep feelings of compassion, but smaller effects when the level of fear is high. The last point seems counter intuitive to many, but upon consideration, the relationships make sense and they bear important implications. Compassion is an interpersonal, connecting emotion, while fear drives us toward personal survival; it separates us. The bottom line is that something associated with mass consciousness is changing the physical world, represented by our network of physical random number generators. We don't have full explanations yet, but the database accumulated over years is rich. It holds information that should lead to understanding, not only of the GCP effects, but to a more comprehensive view of consciousness.

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TWO TRIALS OF A FREE-RESPONSE ESP TEST IN TWO GROUPS OF HYPNOTIC SUSCEPTIBILITY LOW/HIGH SCORES: A PILOT STUDY

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We conducted two trials of a free-response ESP test. The aim was to determine if two groups of the hypnotically susceptible –the low and high scorers– scored differently in terms of psi hitting. The sample consisted of 101 subjects (69 females and 32 males) psi-believing participants. We used the Harvard Group Scale of Hypnotic Susceptibility which assesses the hypnotisability level when subjects are tested in groups. Participants were categorised as the "High HS" group (N = 20) and "Low HS" group (N = 81). We also used the following criteria to split the sample into three hitting groups: (1) No hits within two trials. one hit within two trials, and (3) Two hits within two trials. The difference among three groups (no hit, one hit, and two hits) was significant (p = .017, 1-tailed). The High HS group scored higher than the Low HS group, which scored at chance (p = .03, 1-tailed).

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TESTING THE THEORY OF MORPHIC RESONANCE USING RECOGNITION FOR CHINESE SYMBOLS: A FAILURE TO REPLICATE[1]

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Rupert Sheldrake's theory of morphic resonance suggests a means by which the thoughts or behaviours of physically isolated members of species can converge in a manner that would not be expected by other forms of learning such as imitation. The proposed mechanism is via what is termed a 'morphogenetic field', a purported collective record of intra-species learning which subsequently shapes and stabilises the behaviours of future generations of organisms. In the human realm, Sheldrake has suggested that the acquisition of language should be influenced by the morphic resonance of past speakers of the language. Parapsychological tests of the theory have thereby typically consisted of learning activities involving a language unfamiliar to the participant. For example, Robbins and Roe presented participants with 10 Chinese symbols, 5 of which were genuine Mandarin Chinese characters whereas the other 5 were imitative symbols designed to appear authentic but having no meaning to Mandarin Chinese speakers. Participants were subsequently given a memory task in which they were asked to identify the symbols they had seen from a larger pool of 20 symbols (10 genuine, 10 imitative) containing all of the 10 originally presented. As predicted by the theory, participants were found to correctly recall more of the genuine characters compared with the imitative characters, and also exhibited more false memories of the genuine

1 We are grateful to the Society for Psychical Research Research Grants Committee for their kind support of this project.

characters. Their bias towards recalling more genuine characters was also correlated with a measure of transliminality. However, potential shortcomings were identified within the experimental design. Most notably, as no methodical controls had been employed when contriving imitative symbols, it was possible that the genuine characters used in the study were in some way inherently more memorable than the imitative symbols which could alone account for the observed effects.

The current study therefore attempted to replicate the findings of Robbins and Roe but drew upon a larger set of more systematically manipulated genuine and imitative characters, and used a more comprehensive system of randomising across participants. One hundred and one participants were shown, in a randomised order, 8 genuine and 8 imitative characters from one of three sets. They then took part in a distractor task by playing 'scissors-paper-stone' against a computer opponent for 1 minute. Subsequently, participants were presented with symbols in pairs (one genuine and one imitative) matched with each other for complexity and radical component (a key element of the character) and asked to indicate if they recalled seeing either character at the presentation stage. For some trials, participants had previously seen one of the characters whereas in others, both symbols were novel. Contrary to the previous study, participants correctly identified a similar number of real and imitative characters, whereas they exhibited more false memories for the imitative. Furthermore, the proposed relationships between the purported morphic resonance effect and transliminality and openness to experience were not supported. The enhanced experimental controls are thought to be the most salient explanation for the nullification of results.

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PRELIMINARY STUDY OF THE RELATIONSHIP BETWEEN LOCAL GEOMAGNETIC ACTIVITY, TIBETAN BUDDHIST MEDITATION AND PSYCHIC AWARENESS: NON-SIGNIFICANT RESULTS

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For the past three decades, research in parapsychology has found evidence that psychic experiences may be related to fluctuations in geomagnetic activity (GMA). Most of this research has used global measures of GMA, but recently Ryan has found that certain classes of local GMA appeared to enhance receptive psi. He demonstrated that these patterns accounted well for the previously reported relationships between psi and global GMA. A long-term study is being run with experienced meditators, which will hopefully help to elucidate this effect. Experienced meditators in India scored well on a receptive psi task, and this finding was further investigated in this study.

A free-response design was used in which the participant, after a 15 minute meditation period, attempted to correctly choose a pseudo-randomly selected video clip. The computer programme (PreCOG) chose a target set at random from a pool of 25 sets, and a target video clip at random from the 4-clip set. PreCOG also randomly selected whether the target would be chosen before the participant saw the set (clairvoyance), or after (precognition). Each participant completed a minimum of 8 sessions (trials) each year. There were 14 participants, all Western Buddhist meditators residing at the Kagyu Samye Ling Tibetan centre in Scotland, or in the nearby village, who had practiced meditation for at least 10 years. Two

questionnaires and one psychological test were completed: the Meditation Attainment Questionnaire (MAQ) is a measure of the level of meditation attainment achieved; the Stroop test is a measure of focus of attention; and the Temporal Lobe Experience (TLE) questionnaire assesses temporal lobe lability, which may indicate both a participant's propensity for psi-type experiences and the degree to which the person is affected by GMA. Geomagnetic field measurements were supplied by the British Geological Survey's Eskdalemuir observatory, which is located 2 miles from Samye Ling.

There were three formal hypotheses: 1) Psi scoring for sessions conducted during periods with high band 3 (0.025 – 0.1 Hz) GMA would be lower than during low band 3 GMA. During the two-year period of this study solar activity was low, and of the 160 sessions run there was only one session with high band 3 GMA. Therefore, no meaningful analysis could be done.
2) Psi scoring for sessions conducted during high band 1 (0.2 – 0.5 Hz) GMA would be higher than during low band 1 GMA. Again, due to the low level of solar activity, there were no findings. 3) Years of meditation practice would be positively associated with higher psi scoring. This hypothesis was not supported.

In addition, some exploratory analyses were done. Of these, the Stroop, MAQ and TLE failed to show significant correlations, possibly owing to the overall chance psi scoring. A peak of psi scoring was found in May, supporting earlier findings by Sturrock and Spottiswoode. There were reasonably strong correlations of psi scoring with seasonal change in temperature. There was no effect of lunar phase on psi scoring. A follow-up study for a further two years is in progress.

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"IT'S LIKE A RECORDING ON A WONKY TAPE": UNDERSTANDING MENTAL MEDIUMSHIP USING INTERPRETATIVE PHENOMENOLOGICAL ANALYSIS

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Recent investigations of mediums have tended to focus on a proof-oriented approach intended to demonstrate whether or not an explanation of mediumship in terms of discarnate survival is tenable (e.g., Beischel & Schwartz, 2007; O'Keeffe & Wiseman, 2005) rather than exploring the subjective meanings attributed by mediums for their claimed abilities by adopting a process-oriented approach. While there have been attempts in the US to interview mental mediums to explore how their claimed abilities to communicate with spirits may have developed and how mediumship may function (e.g., Emmons & Emmons, 2003; Rock, Beischel, & Schwartz, 2008), relatively little is known about the phenomenology of modern-day spiritualist mental mediums in the UK. Therefore, the main aim of this research was to map mediums' own understanding of their experiences regardless of the actual ontology of mediumship. For example, how do mediums perceive their abilities to have originated and developed? How do they explain and experience communication with spirits? What is the nature and role of spirit guides? In order to answer these questions a qualitative methodology was employed using Interpretative Phenomenological Analysis (IPA; Smith, 1996). In-depth semi-structured interviews were conducted with ten spiritualist mediums who had gained either certificate (CSNU) or diploma (DSNU) awards from the SNU for demonstrating mental mediumship at spiritualist churches. In keeping with IPA tradition the analysis consisted of close textual

readings of participants' transcripts and a critical understanding based on interpretative activity. Six super-ordinate (primary) themes were identified that illuminate key aspects of the mediumship phenomenon: "A search for meaning: Normalisation of mediumship", "Progression of mediumship", "Relationship with spirit", "Spirit guides as transcendental", "Explanatory systems of mediumship", and "Mediumship as counselling". These themes are discussed consecutively and illustrated by interview extracts to identify ways in which the themes are ground in the data.

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A PRELIMINARY THEMATIC ANALYSIS OF A CASE COLLECTION OF BLACK DOG APPARITION REPORTS

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Apparitions of 'Black Dogs' are well-known in folklore and have been reported for centuries. However, they are not just ancient folklore because they are still being reported to this day, often by people who claim to be previously unaware of such folklore. Black Dog apparitions differ from normal dogs in terms of their size, their eyes and their behaviour. The author has collected 52 first-hand reports of Black Dog encounters; the estimated age of the witnesses at the time of their encounters ranged from 4-57 years (estimated mean 18.9; median 17.0 years). Of the 46 cases where gender was indicated, 26 witnesses were female and 20 were male.

As part of a preliminary qualitative thematic analysis, the case reports were read numerous times by the author to gain familiarity with the data and then were coded for common themes that emerged from the reports. These initial codings were then grouped together and organized into overarching themes. Five main themes (and numerous sub-themes) were identified: the location and environmental conditions relating to the encounter; the circumstances of the encounter; characteristics of the witnesses; the dog's appearance; the dog's behavior. The Black Dogs were mostly encountered outdoors at night. Many witnesses were relaxed and stationary but others were quite active and moving around at the time of their encounter. A number of witnesses mentioned that a family member was ill at the time and was later found to have died at around the same time or else they fell ill or died soon afterwards. Many of the witnesses had no prior knowledge of Black Dogs. Some witnesses were alone but in other collective cases the dog was seen by more than one person simultaneously. Most people reported a single encounter with a Black Dog; a few people had seen it two or three times and a small number of people had seen it many times. The reaction of witnesses to an encounter with a Black Dog varied, ranging from the negative through indifference to the positive, depending partly upon where it was encountered and what the dog did. Witnesses provided a variety of normal, paranormal and supernatural interpretations and explanations for their experiences. Some had had other anomalous experiences too. Many of the witnesses seemed convinced that it was no ordinary dog. This seemed to be borne out of the unusually large size, features and behaviour of the dog and that, in many cases, it seemed to vanish into thin air or gradually fade away. The dogs' eyes were often reported to be glowing or shimmering or glinting; sometimes the eyes were reported to be large like balls or saucers. In a few cases the dog was reported to be headless. In one case the dog was described as having a human face; in another case the dog apparently had no facial features at all. Many witnesses heard sounds characteristic of a dog but a number of witnesses were surprised to find that the

dog seemed to make no sound at all. Many witnesses felt that the dog had a sense of purpose and described how it moved in a determined and focused manner, often at great speed, and in a direct straight line. In some cases, the dog remained stationary, standing, sitting or laying down, but in most cases it walked or ran across in front of, towards or alongside the witnesses. There were two noteworthy cases where the dog appeared to fly through the air. In rare cases, the dog 'shape-shifted' into another form or communicated, seemingly via telepathy; in one case it is reported to have literally spoken to the witness. The Black Dog was generally considered to have negative intentions, though in a few cases the witnesses felt protected by it. In some cases the dog seems to have been aware of the witnesses but in other cases the witnesses reported that it never looked in their direction or didn't seem to be aware of them. It was extremely rare for any of the witnesses to claim that the dog left any physical trace of its visit.

This research has confirmed some of the reported features of Black Dog apparitions using first-hand accounts but there is a need for further investigation into the circumstances of these experiences and potential environmental influences, as well as the characteristics of those having the experiences, if we are to reach an integrated understanding and explanation(s) for this phenomenon. A good theory of apparitions needs to explain as many types of apparitions as possible. Black dog apparitions provide an unusual and interesting challenge to some current theories and explanations for apparitions; for example, with regards to the traditional spirit hypothesis, if these apparitions are the spirits of deceased animals then why do they not look or behave like known living animals? A similar problem applies to the trace or 'stone-tape' theory which proposes that past events are somehow recorded in a particular physical environment and that this information is then replayed or picked up somehow at a later date The next stage of the project will attempt to quantify the identified themes and to perform a cluster analysis to see if any unique groupings of the content become apparent. This might suggest, for example, that there are distinct types of Black Dog experiences that occur in particular circumstances.

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ABSTRACTS

Research Briefs

LABILTY, PARANORMAL BELIEFS AND PSYCHOKINETIC EXPERIENCES: DEVELOPMENT OF A LABILITY SCALE USING AN ONLINE SURVEY-BASED STUDY

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In recent years there has been a resurgence of interest in the experimental study of psychokinesis (PK), with particular focus on the new construct of lability, defined by Braud (1980) as "a systems ready capability for change". Although this description by Braud and that of lability within Stanford's Conformance Behaviour Model (CBM) (1978) include the construct as being inherent within a whole system, it is still uncertain as to whether this is an accurate portrayal. Indeed within Stanford's CBM it is posited that psi capabilities would not share the same mechanisms as those involved with sensory and perceptual information processing. With humans comprised of a multitude of differing processes – both psychological and physiological – it begs the question as to whether only certain facets with prominent labile capabilities would create an impact on PK phenomena. Furthermore, if such facets are identified, could an individual be subsequently characterized as being 'labile'? With micro-PK effects manifested in the laboratory consistently related to macro-PK and poltergeist activity in real-world environs, there have been many assumptions made regarding the role of individual agents. A popular theory has been that such individuals are reacting unconsciously to a stressful situation as a form of maladaptive coping response (Roll, 1983), thus consequently supporting Braud's and Stanford's theories of PK effects being mediated by internal individual lability interacting with other external systems. Indeed, previous PK-RNG studies based on Stanford's CBM (1978), by Holt and Roe respectively, (Holt & Roe, 2006; Roe & Holt, 2006),) have shown significant PK effects from the interaction between high and low levels of individual and RNG lability. These studies were based on the premise that certain aspects from cognitive, neurological and emotional individual differences were key to exploring lability and thererfore, a battery of measures was employed to assess individual lability via an aggregation of scores, highlighting the need to develop a single, comprehensive lability instrument. For this study, taking it's cue from previous research (Drennan, Roe, & Broughton, 2011), measures included to assess lability were the Creative Cognition Inventory (Holt, 2007); The Emotional Creativity Inventory (Averill, 1999); Goldberg's Openness to Experience Scale (Goldberg, 1999); Mood Affect (Akiskal, Maser, Zeller, Endicott, Corvell, & Keller, 1995); and the Personal Philosophy Inventory (Persinger & Makarec, 1987). For use in the online survey two further scales investigating paranormal phenomena were included – the Anomalous Experience Inventory (Gallagher, Kumar, & Pekala, 1994) and the Rhine Psychokinesis Questionnaire (Simmonds-Moore, Rhine Feather, & Gadd, 2010). Following activation of the online survey for 8 weeks, data from a sample size of 192 respondents were eventually used for conducting analyses.

Factor analyzing the five individual difference measures produced a new Lability Scale consisting of 71 items (including 4 reversed scored items) with strong overall reliability (α = .86). Five factors were retained accounting for approximately 35% of the cumulative variance:
Factor 1 Intuitive Cognition (α = .92)
Factor 2 Conceptual Cognition (α = .60)
Factor 3 Ego-Orientated Cognition (α = .78)
Factor 4 Emotional Interpretation (α = .71)
Factor 5 Analytical Cognition (α = .85)

Concurrent validity was produced between the Lability Scale and the five individual difference measures involved in the study, where all but Goldberg's Openness to Experience Scale (Goldberg, 1999) showed strong positive correlations. Subsequently, the relationships between individual lability and

paranormal belief and psychokinetic experiences were explored. Significant negative correlations were shown between lability and both paranormal belief (r = -.56) and psychokinetic experience (r = -.51). Furthermore, significant negative correlations were also shown between both paranormal belief and psychokinetic experience scores and Intuitive Cognition, Ego-orientated Cognition and Emotional Interpretation factors. There were no significant relationships found between paranormal belief and psychokinetic experiences and either Conceptual Cognition or Analytical Cognition.
Performing one way analyses of variance found significant differences between the means of paranormal belief ($F_{2, 160.47} = 44.45$, $p < 0.01$) psychokinetic experiences ($F_{2, 160.47} = 32.74$, $p < 0.01$) and levels of lability (low, moderate, high), mirroring the results found in previous experimental PK-RNG studies.

These findings have implications for the next stages of research which consists of a series of three experimental PK-RNG studies employing the new Lability Scale, which is hoped will replicate the lability interaction witnessed previously and further confirm construct validity of the new measure. In addition, it is expected that with further usage there will be subsequent refinement of the Lability Scale and factor structure. As it stands, Factor 5 Analytical Cognition, which although has a strong Cronbach's alpha of .85, consists of only 5 items and is on the cusp of being a 'bloated specific', therefore providing a case for subsequent exclusion. However, at this time, it does appear likely that lability will remain multi-dimensional, thus reflecting the fact that it incorporates various facets of individual processes and allow scope for future research to explore whether there are dominant labile processes which may have a greater impact specifically on PK effects. Furthermore, it is interesting to note that significant results are being shown in relation to individuals with low levels of lability corresponding with high levels of both paranormal belief and psychokinetic experiences, suggesting that instances of macro-PK and poltergeist activity phenomena may indeed be more likely mediated by blunted or maladaptive individual responses. Finally, with this in mind, it is hoped that by gaining a better understanding of individual lability throughout the ongoing research will provide a key feature for constructing a predictive statistical model for PK effects both within the laboratory and within real-world situations.

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GHOST HUNTING GROUPS IN THE USA AND IN GERMANY

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Over the past several years, *Ghost Hunting Groups* (GHGs) were founded, which have committed themselves to the investigation of presumedly haunted sites. This phenomenon has appeared predominantly in the USA, but is not limited to this area. Three factors are regarded as being responsible for the growth of the ghost-hunting community in the USA: (1) the presence of ghost-hunting-related themes in the media, such as on television and in movies, (2) the popularization of the internet and the possibilities that emerge in the area of information access, general exchange and networking, as well as (3) easy availability and manageability of high-tech equipment along with the simplification of data processing due to data digitalization.

The stress on a scientific nature, the professionalism and a skeptical attitude are the usual strategies of legitimization when dealing with the "unexplained". However, a further dimension plays a role in the current ghost-hunting community in the USA: a down-to-earth attitude combined with the stress on a skilled trade with regard to ghost hunting which has also an influence on the attitude towards ghosts as a whole. On the one hand they achieve a largely unquestioned status of reality for many people because reality TV constantly offers "proof" of the existence of ghosts. On the other hand they largely lose their threatening character because it is shown that they can be dealt with and that they can, to a certain extent, be controlled: they can be got rid of with the right tools in the same way as the inconvenience of a drain blockage, and it is in this way that also "blockages" in the channels to the "other side" and supernatural can also be got rid of in no time through the knowledge of a skilled trade and the appropriate technical equipment.

North American Internet sites and TV programmes on ghost hunting give the impression of a specific mentality which influences the movement: Websites which do not have dramatic occult symbolism on them are difficult to find. Often a precise list of all the technical equipment used for ghost hunting can be found. The "weapons" are, so to say, laid out in the open. This orientation towards the (pseudo) rationalism of high-tech ghost hunting and the belief that technology can be used to find a solution to the problem is accompanied by an uncritical belief in demons and ghosts – a combination which may appear somewhat alien from a mid-European perspective. In Germany, the number of the GHGs has been increasing too since the beginning of the broadcast of episodes from the American *Ghost Hunters* series – from about ten groups in the midyear of 2009 to 27 groups in February 2011. To understand the differences between American and German GHGs it is necessary to examine the dimension of the predominant worldviews and religious beliefs. If ghost hunting is understood as a trade, it appears to be a distinctly American phenomenon and illustrates striking cultural differences to the situation in Germany: American pragmatical attitude, which is associated with fundamentalist and spiritualist religious beliefs, stands in contrast to the dominant mindset in Germany which is that of a secular worldview influenced by the natural sciences. This does not, however, significantly reduce the influence of the American ghost hunting models on German GHGs. Their paradigms and methods (for example, their technological orientation as well as their presentation on the Internet) are adopted, albeit framed within another worldview. Despite individual differences we can, however, assume that the majority of German investigators advocate a position which is somewhat more skeptical and more strongly oriented towards a scientific model of explanation. People who have a mediumistic ability are, admittedly, also used by some groups as an 'investigatory instrument', but none of the groups boast of using "demonologists" in the official descriptions of themselves. In the German cultural situation, an animistic-psychological interpretation of ghost appearances, and anomalistic phenomena appears to be the most tenable, and tainted with a slight risk of social stigmatization.

The increasing number of amateur research groups has, however, led to a development which must be viewed critically. Namely that the groups' desire for media attention has resulted in a distorted public portrayal of what expertise actually is. Amateur research in its popular form of GHGs produces an erroneous picture of science in general and anomalistics in particular. A materialist approach is inappropriately combined with basic assumptions which are rarely questioned and often of a spiritual or religious nature. Scientific hypotheses directed at exploring the nature of the phenomena itself are not set up and tested. From a psychological perspective a further critical development must be mentioned: the German GHGs' are performing more and more field investigations within the private sphere of people affected by such phenomena. There is enough evidence to suggest that most of these poltergeist cases and hauntings are connected with a complex psychodynamic family constellation, and demand professional investigation and counselling. Members of newly founded GHGs usually do not have the technical training which is necessary in this context. Some of the GHGs offer explicitly "competent" help on their Internet site for those people who suffer from allegedly paranormal occurrences in their homes. Persons who are effectively in need of help, and who are seeking support, come across such services in the first instance.

This raises questions about reasons and the shift of the prerogative of the interpretation of such phenomena. Will a similar development in the area of anomalistic research be seen, as has already taken place in UFO research: the total takeover of the field by amateur researchers – with an associated

standardization of models and methods? How will the people concerned react in the future if academic investigators do not move in with a well-known (from media presentations) arsenal of high-tech equipment, but focus on 'soft' examination methods such as interviews, questionnaires, and psychodiagnostic tests as the case may be?

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EXPLORING DIFFERENT PERSONALITY TRAITS WITH PSYCHIC CLAIMANTS

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There are not enough studies on personality variables in psychic claimants to draw significant conclusions, although a number of studies have found a positive relationship between extroversion and ESP performance. Parra and Argibay (2008) compared a group of self-claimed psychics with a group of ordinary people "non-psychics" in order to determine if participants were capable of distinguishing between photographs of people who had died and people who were still living. The experimental results showed that the "psychic" group tended to score higher in psi-hitting than the "non-psychic" group, who scored at the level of mean chance expectation. The "psychic group" consisted of 49 participants (72% females and 28% males, Mean Age = Mean = 44.50; SD = 10.91) and the "non-psychic" group consisted of 45 participants (82% females and 18% males, Mean Age = 49.07; SD = 13.97), both were also all well-educated and believed in psi. Seventy-eight percent of the first group had had some training in meditation or other techniques offering practice in an internal focus of attention.

The purpose of the present study was to investigate the differences between groups of psychic claimants (N = 49) and "non-psychics" (N = 45) on such personality factors as neuroticism, extroversion, openness, agreeableness, and conscientiousness. The participants met during two-hour workshops, free of charge, organized at the Institute of Paranormal Psychology (IPP) in Buenos Aires. Participants completed the NEO-PI-R, a questionnaire which has 240 statements that are answered on a five point scale with the following choices (strongly disagree, disagree, neutral, agree, and strongly agree) and Anomalous Experiences Inventory, which is a 70-item self-report inventory that maps two major subscales particularly helpful in identifying different types of people for research on psi-related experiences and abilities in the laboratory.

The "psychic" group had significantly lower mean scores than did the "non-psychics" on the Neuroticism factor ($p = .02$, Cohen's $d = .53$), and the Extroversion factor ($p = .04$, Cohen's $d = .24$). However an unexpected result showed that the "psychic group" also had significantly higher mean scores than did "non-psychics" on the Conscientiousness factor ($p = .02$, Cohen´s $d = .87$), as well as on all its facets.

Finally, the relationship between higher scores on the Conscientiousness factor of the NEO-PI-R in "psychics" may be due to the fact that persons who encompass the ability to deal effectively with the inner world of feelings also relate well to the outer world of events. People who cope well with their emotions are particularly effective in dealing with negative feelings. Probably psychic claimants –as a group– tend to show a high degree of organization, persistence, control, and motivation in goal-directed behaviour, along with a belief in the efficacy of their own psychic abilities and a need for personal achievement and sense of

direction. They also emphasise the importance of fulfilling moral obligations, the capacity to begin tasks, and follow through to completion despite boredom or distractions.

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AN INVESTIGATION INTO THE PREVALENCE AND PHENOMENOLOGY OF SYNCHRONICITY EXPERIENCES IN THE CLINICAL SETTING

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Attempts to explain synchronicity experiences by mainstream science argue believers in the paranormal are more prone to seeing meaningful patterns in randomness (Blackmore & Moore, 1994) or underestimate the probability of their occurring by chance (Brugger et al, 1993). However, empirical studies testing these theories have found mixed results. Brugger, Landis, and Regard (1990) found a moderate correlation between belief in the paranormal and subjective frequency of coincidences, whereas others have found no differences between believers and sceptics in terms of probability misjudgement (Blackmore, 1997; Bressan, 2002). Regardless of whether synchronicity experiences are associated with a belief in the paranormal or are indeed random events, a large body of literature exists that claims synchronicity experiences (meaningful coincidence between an inner event and an external event occurring simultaneously or at a future point in time) frequently occur in clinical settings, especially in psychotherapeutic settings, and that they can promote personal growth (Jung, 1952; Keutzer, 1984; Nachman, 2009). For example, there have been occurrences where the therapist has dreamt information about the client that is later verified as correct (Ehrenwald, 1948; Orloff, 1996) or where the therapeutic setting becomes part of the synchronistic event, the most notable being the Scarab beetle scenario[2] (cf. Jung, 1952). It has been proposed that synchronicity may be more likely in the psychotherapy setting given the openness to unconscious communication, the salience of the therapeutic relationship, and the development of symbolic thought (Marlo & Kline, 1998). However, we still know relatively little about how common synchronicity experiences are in different clinical settings or how they are interpreted by clinicians with different therapeutic orientations (i.e. psychotherapists, clinical psychologists, psychiatrists, and counsellors). This is surprising given that such experiences could have implications for the therapeutic relationship, the clinical outcome, and models of psi. Anomalous experiences that occur in the clinical setting are an important consideration for mental health professionals and parapsychologists as research findings will add to our knowledge of a growing area tentatively termed "clinical parapsychology" (Belz, 2009) and may point to the need for a more integrative approach to therapy that acknowledges anomalous experiences as subjectively real for the client.

2 Jung recounts a therapeutic session in which a client who was resistant to change describes a dream about a golden scarab beetle at the exact moment he heard a tapping on the window, only to find that it was a beetle closely resembling the scarab. Jung saw the scarab as an Egyptian symbol of rebirth and discussed the coincidence with the client, which helped to bring about transformation.

This research brief outlines two planned studies investigating synchronicity experiences in the clinical setting using a mixed methods approach. Firstly, a quantitative study, involving a nationwide survey; with a representative sample of clinicians (psychiatrists, counsellors, clinical psychologists, and psychotherapists) is under construction to investigate the range and incidence of synchronicity experiences within different clinical settings. For example, how common are synchronicity experiences? Are there any differences between clinicians in terms of occurrences and form of synchronicity experiences? Secondly, a qualitative study using interpretative phenomenological analysis (IPA; Smith, 1996) will explore the phenomenology of synchronicity experiences by interviewing a purposive sample of clinicians who report such experiences in their therapeutic sessions. Interviews will focus on how synchronicity experiences are interpreted by different clinicians (e.g. as evidence of psi/anomalous communication, as products of random events to which meaning is attached and/or as useful for the therapeutic process) and what features influence these interpretations. Interviews will also explore how clinicians make sense of these experiences. For example, what do they mean to them? How do they identify a synchronistic experience? As such, the research is not concerned with whether synchronicity is proof of psi phenomena *per se*; rather it seeks to establish how common these experiences are within different clinical settings and explores the process and nature of these experiences from the perspective of the clinician. The current status of the research will be reported during the presentation.

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AN INVESTIGATION OF GHOSTLY PHENOMENA AND THE CHARACTERISTICS OF PEOPLE WHO HAVE AND HAVE NOT HAD SUCH AN EXPERIENCE

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There has been a recent surge of interest in environmental variables in apparitional and poltergeist cases. However, whilst being extremely valuable, these fieldwork studies have focused on these environmental variables and neglected the circumstances and psychological characteristics of the people concerned. Research has begun to examine individual differences in environmental sensitivity and there is some suggestion that more environmentally sensitive people are more likely to report apparition-type experiences. It could be that such people respond more to the effects of environmental variables causing the experiences or, if ghosts are objectively real, it could be that such people are more likely to detect their presence. Amongst the general public there also seems to be an assumption that ghostly phenomena only occur at night and in darkness, and this seems to be reinforced by recent television programmes.

Studies comparing the personality characteristics of people who have experienced apparitions with a matched control group who have not are rare. Personality dimensions that might differentiate between these groups include fantasy proneness, boundary structure and transliminality. Given the overlap of these constructs, a recent study suggested that transliminality is the most appropriate measure to use. A few studies have found a relationship between transliminality and paranormal experiences generally and ghosts/poltergeist/other encounter experiences specifically but no studies seem to have considered different types of apparitional experiences to see if more unusual experiences are associated with more extreme personality scores. It has been estimated that more than 80% of apparitions are of humans; this is probably

why research has focused upon this type but other forms of apparition that are less common or atypical warrant attention too. One such example is the 'Black Dog' and to date the author has collected over 50 first-hand reports of such apparitional encounters. Witnesses from this case collection will be invited to participate in this study and it is predicted that there will be a difference in terms of transliminality and environmental sensitivity between those who have reported a human apparition and those who have reported a Black Dog apparition.

An internet survey is being conducted and completed both by people who have and have not had some form of ghostly experience. This survey will examine the circumstances in which ghostly phenomena are reported and see whether they are mostly reported at night and in the dark. Participants will give details of any ghostly phenomena too and will complete the Revised Transliminality Scale (Lange, Thalbourne, Houran, & Storm, 2000), the Highly Sensitive Person Scale (Aron & Aron, 1997) and Thalbourne and Delin's (1993) 18-item measure of paranormal belief. The survey contains four questions (12, 14, 15, 18) taken from Massullo's (2008) Sensitivity and Unusual Experiences Survey. It is predicted that those who have had a ghostly experience will score significantly higher in terms of transliminality and environmental sensitivity than a control group who have not had such an experience.

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ABSTRACTS

Panels

PANEL 1:

FUTURE DIRECTIONS IN THE STUDY OF MENTAL MEDIUMSHIP

Chair:
Carlos S. Alvarado

Panelists:
Carlos S. Alvarado, Everton Maraldi,
Alexander Moreira-Almeida,
Elizabeth Roxburgh, Chris Roe & Wellington Zangari

Traditional parapsychological investigations of mental mediumship have been designed to asses the possibility of the acquisition of veridical information as seen in the pioneering studies of medium Leonora E. Piper conducted by Richard Hodgson, James H. Hyslop, and Oliver Lodge, among other researchers. Such an approach has continued to our days, as seen in work published in the last decade by Julie Beischel and Gary Schwartz, Emily Kelly and Diane Arcangel, and Christian Gaden Jensen and Etzel Cardeña. But as seen in the papers presented in this panel discussion, as well as in the old work of individuals such as Théodore Flournoy and Eleonor Sidgwick, there are other ways to study mediumship that do not emphasize the veridical that are of basic importance to increase our understanding of the phenomenon. Such an approach was taken in the discussions published by Carlos S. Alvarado, Michael Grosso, and Everton Maraldi, Fatima R. Machado and Wellington Zangari published in the Summer 2010 issue of the Journal of Scientific Exploration, which made a call for the exploration of various psychological approaches to mediumship. This more general perspective, one that assumes that mediumship is a complex phenomenon in which the parapsychological may interact with the psychological and with other variables (be them anthropological, psychiatric, or sociological), is the one we follow in this panel. Hoping to help the field of mediumship research advance we are proposing a panel discussion offering ideas for future research. Such ideas refer to the study of potential relationships between mediumship and dreams, psychopathology, psychosocial processes, well-being, and the consideration of issues involved in the development of mediumship and in the use of qualitative methods of research.

MEDIUMSHIP AND DREAMING: A NEGLECTED AREA OF RESEARCH

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In a previous paper published in the *Journal of Scientific Exploration* I suggested several topics of research on the psychology of mediumship; among them psychopathology and personality and cognitive variables (Alvarado, 2010). One area I did not discuss in detail, and one that is virtually unexplored, is the study of the dreams of mediums. A review of the few published speculations and observations on the subject is presented and is used to generate ideas for further research.

On the assumption that the "trance-world of a medium and the world of dreams are not very far apart" (Van Eeden, 1902), we may hypothesize that there may be positive relations between mediumship and dreams suggestive of a common substratum, such as the functioning of the subconscious mind. Do mediums show high rates of lucid dreams and dream recall? Similar to previous research with non-mediums that found positive relationships between self-reports of vivid, lucid dreams, dream recall, and parapsychological experiences, it is likely that mediums will experience higher rates of these phenomena as compared to non-mediums. Such research may be extended to a variety of other dreams. This may include false awakenings, dream control, and other dream variables. Another area is the content of dreams, a topic that has received much research attention in recent decades. Many questions come to mind. Following the well-known Hall-Van de Castle system of dream content analysis, we may code medium's dreams in terms of such categories as characters appearing in the dream, social interactions, activities, emotions, and the settings in which the dream took place and compare them to the dreams of non-mediums.

Other research questions include the exploration of the possibility that: (1) the medium's dreams show more evidence of primary process thinking—unusual content, symbolism, illogical aspects—than the dreams of non-mediums; and (2) the medium's dream life and mediumistic mentation may affect the other. Another area of research is the often made claim that mediumship can act through dreams. One might ask if there are similarities between the imagery of mediumistic dreams and that of the medium's waking consciousness. Also, are there similarities between veridical mediumship dreams and ESP dreams of non-mediums? Research along these lines will help us to increase our knowledge of this neglected area of mediumship research.

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EXPLORING THE RELATIONSHIP BETWEEN MEDIUMSHIP AND MENTAL HEALTH

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Mediumship is related to anomalous experiences that can be confused or mixed with psychotic and dissociative symptoms, often becoming a challenge to differential diagnosis. Throughout the 19th and 20th Century, mediumistic experiences tended to be considered as mental disorders by psychologists and

psychiatrists in Europe and America. By the end of the 20th Century, official diagnostic manuals became more open to the possibility of non-pathological mediumistic experiences. However there has been a lack of empirically grounded guidelines to make the differential diagnosis between healthy spiritual experiences and mental disorders. The presentation will review the research in psychiatry and psychology conducted to date to investigate the mental health of mediums and the differential diagnosis between mediumship and mental disorders. There is strong evidence that psychotic and anomalous experiences are widespread in the general population and that most of them are not related to psychotic disorders. Mediumship frequently appears with dissociative and psychotic experiences and may cause transient distress but without being part of a mental disorder. The association of mediumistic experiences with good or even higher levels of mental health and social adjustment do not corroborate the view that the mediumistic experiences are less severe symptoms in a continuum with dissociative or psychotic disorders. Although in need of further investigation, it is possible to propose some features that suggest the non-pathological nature of the experience: lack of suffering, social, or functional impairment; compatibility with the patient's cultural background and recognition by others; absence of psychiatric comorbidities; control over the experience; and personal growth over time. For the advancement of our understanding of mental health issues of mediumship, future studies on the field could address a) psychological and psychiatric features of the subgroup of individuals who present psychotic experiences but do not have mental disorders and how they do differ from the subgroup with mental disorders; b) prospective studies testing the validity and usefulness of the proposed criteria for differential diagnosis between mediumship and mental disorder; c) the value and implications of using different criteria (symptoms, social adjustment, quality of life, distress, lack of control, disability, etc.) to define mental health and mental disorder; d) the investigation of similarities and dissimilitude between mediums from different socioeconomic and cultural backgrounds; e) neurofunctional studies comparing brain activation during psychotic experiences in mediums and in psychotic patients; f) differentiation in analysis between expert and novice mediums; g) impact on individuals' mental health of the mediumistic practice by those with mental disorders; h) impact of antipsychotic use over mediumistic experiences; and i) efficacy of therapies based on mediumship.

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THE FUTURE OF MEDIUMSHIP RESEARCH: A MULTIMETHODS APPROACH

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It is argued that there is a need for more systematic work that employs a mixed methods approach to combine qualitative and quantitative data in order to give a thorough account of the phenomenon of mediumistic communication. There has been a growing acceptance of the value of adopting a qualitative or mixed methods approach to address parapsychological issues, and some of this has focused on the question of mediumship. For example, recent doctoral research by the author(s) used an auto-ethnographic approach in an attempt to gain experiential understanding of the mediumship phenomenon, and as a precursor to designing more formal studies. This included a nationwide survey and a semi-structured interview study to investigate psychological and phenomenological inquiry components of Spiritualist mental mediumship in the UK.

The psychological/quantitative component of the research explored whether the role of a medium is associated with psychological wellbeing or psychological distress. Findings from this work suggested that mediums present with better mental health than comparable others and that the process of redefining one's identity and social support associated with the mediumship role may serve as a therapeutic function. The phenomenological/qualitative work found that spiritualist mediums placed particular emphasis on the normalisation and validation of initially distressing experiences (e.g. hearing spirits) by family, society and the spiritualist church network and the importance of constructing a personal experiential framework for making sense of experiences. These studies involved experienced mediums so it was not possible to explore the means by which inculcation in a spiritualist subculture might serve as a means of managing such stressors.

Thus, in terms of future research, one proposal would be for a longitudinal study to follow people through mediumship training as they progress from neophyte to qualified practitioner. This could involve the administration of wellbeing measures at baseline (at the start of mediumship development) and then at various stages of mediumship development, which would be compared with an appropriately matched control group. An additional qualitative strand could interview mediums at various stages of their development so that insight might be gained into the process by which abilities (and subjective understandings) might evolve with increasing experience. A further ethnographic study involving participant observation of mediumship training courses could explore what practices are important, how one develops as a medium and what techniques are learnt to control mediumship. These combined studies would allow us to explore whether adoption of the mediumship role through mediumship training has an impact on mental health.

While these ideas for future research focus on the perspectives of mediums, a further proposition would be to undertake more systematic research investigating the experiences of the client in the mediumistic reading dyad in order to generate an understanding of their expectations and perceptions of mental mediumship. Finally, it is acknowledged that parapsychologists should actively seek conventional explanations for ostensibly paranormal phenomena, such as mediumship, and this could lead to a consideration of cold reading.

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BRINGING THE MEDIUM TO THE CENTER: VALUING INDIVIDUAL AND GROUP DIALECTICS IN THE STUDY OF MEDIUMSHIP

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In parapsychology the study of mediumship has emphasized the alleged paranormal phenomena produced by mediums. In general, researchers evaluate more the physical/mental manifestations relevant to the theme of survival and neglect the life history and social context of mediums. In this presentation, we intend to point out that such neglect may have affected the understanding of mediumship, including its possible paranormal manifestations (physical or mental). For example, by ignoring the mediums´s emotional, cognitive, sexual and social life: 1) the medium can be reduced to a mere producer of phenomena, thus running the risk of over-idealization or, conversely, a devaluation of his person; 2) we may lose the opportunity to better understand the psychology of the medium, which may influence or cause the

mediumnistic/psychic manifestations; and 3) we may make more difficult the differentiation of the super-psi and survival hypotheses, assuming that psi is motivated by processes associated with the psychodynamic and psychosocial dimension of the mediumship. Examples will be presented of how knowledge of the life and the social context of mediums may be useful to understand the complexity of the phenomenon of mediumship. In this sense, it is essential determine: 1) what motivated a person to become a medium (conscious and unconscious motives of his/her religious conversion); 2) how his/her mediumship developed, and what is the relationship between development and the medium's life choices; 3) what are the techniques of psychic/mediumship development adopted by the group to which the medium belongs; and 4) how the social context influenced the development of mediumship. We will also discuss the importance of other biographical and psychosocial factors related to mediumship, such as the influence of childhood and certain cognitive and affective processes potentially related to its development. Finally, we will consider the institutional and socio-historical dimension of mediumship, so as to see how the history of mediumship practices, specific to each cultural context, conditions or affects the phenomena of a medium and his/her group.

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PANEL 2:

AYAHUASCA AND EXCEPTIONAL HUMAN EXPERIENCE

Chair:
David Luke

Panelists:
Ede Frecska, Stanley Krippner, David Luke, Luis Eduardo Luna & Michael Winkelman

This panel will explore the use of the Amazonian sacramental decoction, *ayahuasca*, and its role in facilitating exceptional human experiences in those that ingest it. Ayahuasca has a profound effect on consciousness and has been used by indigenous shamans and healers in the Upper Amazon for several millennia and, uniquely to Brazil, has given rise to several syncretic Christian churches that also use the brew sacramentally. Panel presenters offer perspectives on the use of ayahuasca and its ensuing experiences and phenomena, spanning anthropology, psychology, psychiatry, neuroscience and physics, and offer conceptual, experiential, phenomenological, neurobiological and cross-cultural dimensions to the discussion concerning the role of ayahuasca in parapsychological research.

AYAHUASCA, ASCS AND THE NON-LOCAL, DIRECT INTUITIVE MODE OF EXPERIENCE

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Nonlocal information about the physical universe offers the missing link between objective science and subjective experience, including consciousness and spiritual experiences. Based on the principle of nonlocality and with the "quantum array antenna" of subcellular, cytoskeletal networks, the brain can be resonating with the whole universe. The brain may contain the whole Cosmos like a quantum hologram, and the perennial wisdom of "As above, so below (or: As within, so without)", "The kingdom of Heaven is within you", or "Look within, you are the Buddha" creates the appropriate perspective. The cytoskeletal matrix can be the mediator of the Jungian 'collective unconscious', and cytoskeletal quantum holography can explain a very common but obscure phenomenon known as 'intuition'.

Ritual ceremonials and other spiritual practices based on the integrative forms of altered states of consciousness (ASCs)—an integrative ASC leads to healing in contrast to a disintegrative one such as psychosis or drunkenness—elude neuroscientific explanations based on classical cognition. Classical cognition can be conceptualized as a 'perceptual-cognitive' way of information processing characteristic of ordinary states of consciousness. This information processing utilizes the local aspect of the universe and is contrasted with another way of obtaining knowledge, which is based on nonlocal connections denoted here as 'direct-intuitive'.

The 'perceptual-cognitive' mode is neuroaxonally based, relies on sensory perception, cognitive processing, and on symbolic (visual, verbal, logical-language) mediation. This form of information processing is an indirect mode of achieving knowledge compared to the 'direct-intuitive' way. In accordance with the indirect nature of its processing, this mode splits the world into subject and object, and then performs its modeling. The linguistic feature makes this mode transferable from individual to individual but at the same time limits it to be culturally bound. The 'perceptual-cognitive' mode of information processing has been evolved for the purpose of task solving, represents a "coping machine" at work, and reaches its peak in Western scientific thinking.

The introduction of a nonlocal, 'direct-intuitive' channel is necessary for an ontological interpretation of integrative ASCs, such as the shamanic or mystic states of consciousness. We may assume that this mode of accessing knowledge is based on subcellular, cytoskeletal functions, provides direct experience (no subject-object split), and is not bound by language or other symbols. It is practically ineffable, non-transferable. Since the 'direct-intuitive' channel lacks linguistic-symbolic mediation, it has universal characteristics, shows more transcultural similarity, although culture-specific interpretations exist. This may be why mystics get better agreement comparing their "data" than do materialistic scientists. I am not arguing here for the ontological validation of every experience in ASCs, but for a few, very informative experiences that constitute the integrative ASCs.

ANOMALOUS PHENOMENA REPORTED FROM AYAHUASCA SESSIONS

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Perhaps the most striking anomalous phenomenon concerning ayahuasca is the origin of the compound itself. Narby (1998) commented, "Here are people without electron microscopes who choose, among 80,000 Amazonian plant species, the leaves of a bush containing a...brain hormone, which they combine with a vine containing substances that inactivate an enzyme of the digestive tract, which would otherwise block the effect….It is as if they knew about the molecular properties of plants and the art of combining them, and when one asks them how they knew these things, they say their knowledge comes directly from [the] plants."

When I first read about the compound, I notice that is was described as the "vine of the dead." I felt that this contradicted the reports, and began to use the term "vine of the souls," a term that is now in common usage. In the 1960s, I attended a lecture by J.B. Rhine after which he was approached by the poet Allen Ginsberg, who implored him to do research with "yage," as it was referred to in Ginsberg's co-authored book *The Yage Papers*. Rhine listened courteously, and then left the auditorium. Ginsberg then regaled me with personal experiences, noting that the active ingredient at the time was dubbed "telepathine."

During my visits to Brazil, I had several opportunities to drink the compound during informal sessions, but preferred to wait until the context was suitable. In the late 1990s, I co-led a group of North Americans to Brazil and we were invited to participate in a Santo Daime session in the outskirts of Rio de Janeiro. Since then, I have participated in nine additional Santo Daime or Uniao de Vegetal sessions, and will describe and compare the anomalous phenomena I observed and experienced during this presentation.

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AYAHUASCA, TELEPATHINE AND PSI

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The Amazonian sacramental decoction, *ayahuasca* (containing an alkaloid once called *telepathine* by Westerners), has been used by indigenous shamans and healers for several millennia, apparently, for the explicit purposes of accessing altered states conducive to clairvoyance, precognition, telepathy, out-of-body travel, psychic diagnosis, psychic healing, and spirit communication. It has been argued that the endogenous neurochemicals present in this brew also play a primary neurological role in the occurrence of spontaneous parapsychological phenomena. However, although the neurobiological, anthropological and phenomenological support for this hypothesis is promising, the experimental parapsychological evidence to date is scant, poorly controlled, and inconclusive. This presentation will outline some of the reasons for supposing ayahasuca to be psi-inducing and discuss recent and future attempts to determine the psi-effectiveness of this brew.

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THE AYAHUASCA/YAJÉ COMPLEX AS A TOOL FOR A POTENTIAL RADICAL EPISTEMOLOGY

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Psychotropic plants seem to have been an integral part of the spiritual life of many pre-Columbian societies. Deemed agents of the devil by the religious authorities of the conquerors, their status has been marginalized, except when acquiring the clothing of Christianity, in much the way it happened with Afro-American religious manifestations such as Santería in Cuba, and Candomblé in Brazil. Amerindian societies, which lost 95% of their population within 150 years of European contact, gave the world huge contributions with their knowledge food and medicinal plants. However their intellectual achievements have been stigmatized: the libraries of the Mesoamericans and the quipus of the Andeans were destroyed, shamanism is persecuted even today in missionary outposts from a variety of Christian organizations, and the spiritual legacy of the Amerindians is seen with great suspicion by the majority of the population, even by those who are full or partially genetically Amerindians. And yet it is impossible to understand Amerindian civilizations without some understanding of their use of sacred plants and the modes of cognition they convey. In spite of this, over five hundred years of persecution, elements of Amerindian spirituality and ways of cognition persist, the ayahuasca/yajé complex being an exceptional example.

What can we learn from it? Testimonies from a relatively large number of members of contemporary societies, including Westerners from many countries, show that under respectful set and setting, not necessarily of a strictly religious nature, these Amazonian preparations may lead to extraordinary experiences, considered by some as among the most important in their lives. They can vary from insights about one's personal life and existential presuppositions to the source of creative ideas in many fields, to new understandings of the individual's relationship with the social and natural environment. There are indications that these techniques may provide access to vast informational resources akin to the conscious

exploration of the dream world. We are in the presence of a "radical epistemology", which may include knowledge by transformation, or "becoming" that which in Western terms would be the "object" of one's inquisition. Some examples will be presented from contemporary Westerners as well as some ideas about possible concrete uses in the contemporary world, for example as a cognitive tool in problem solving and the activation of imagination, or as an instrument for ethical and environmental education in the youth, as is the case among some indigenous societies.

AYAHUASCA AND PROPHECY

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The use of ayahuasca has seemingly led to a focus on future events among the various churches, with pronouncements about future catastrophes a notable feature of statements from leaders and members alike. Why should the use of ayahuasca lead to such future oriented proclamations? These phenomena can be understood from two perspectives. One is a cognitive phenomenon referred to as "mental time travel" which is an evolved capacity to predict future events that apparently is more developed than our ability to imagine past events. Another is an understanding of the macro dynamics of the effects of ayahuasca and similar substances on the brain which I have labeled "psychointegration." Psychointegration reflects an integration of lower brain dynamics into the frontal cortex through theta-wave synchronization. The prophetic tendency of ayahuasca can be seen as a specific case of a broader phenomenon of brain wave synchronization exemplified in gamma wave synchronization.

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ABSTRACTS

Posters

ANOMALOUS ANTICIPATORY EVENT-RELATED EEG ACTIVITY IN A FACE RECOGNITION MEMORY TASK

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Anomalous anticipatory effects in baseline psychophysiological measures recorded in studies not intending to investigate psi phenomena have been reported before (e.g. Bierman, 2000). We report another instance of apparently anomalous anticipatory activity identified in EEG data recorded as part of a study investigating ordinary parameters of mood and face recognition memory (Burgess et al., unpublished). Twenty-eight channels of EEG were recorded from ten healthy controls and ten patients with bipolar disorder, while they were first exposed to an experimental mood induction procedure and then performed a face recognition memory task. Neutral and sad mood was induced (in counter-balanced order) by asking participants to recollect autobiographical memories of sad or emotionally neutral events, and participants were then asked to discriminate between unfamiliar (new) and familiar (old) faces presented in a randomised order on screen.

The method of Empirical Mode Decomposition (EMD) was used to analyse the EEG data. This is a data-driven approach to signal analysis which can be used to decompose a complex (i.e. broad-band) signal into simpler component signals of narrow frequency bandwidth. For EEG data these decomposed signals (called 'Intrinsic Mode Functions' or IMFs) correspond approximately to the traditional EEG frequency bands; EMD however does not require pre-specifying the frequency bands expected in the signal, as these are derived empirically from the raw EEG through a simple iterative process. EMD does not assume linearity or stationarity properties in the signal, and has been shown to outperform other methods of time-frequency analysis in estimating the instantaneous (i.e. time-variant) amplitude and frequency of the signal, as well as its instantaneous phase synchronisation (Sweeny-Reed et al., 2007).

Using EMD, four parameters of EEG activity were estimated: evoked (i.e. phase-locked) amplitude, induced (non-phase-locked) amplitude, instantaneous frequency, and phase synchronisation. For each of these four variables, Partial Least Squares (PLS) analysis was performed to identify potential differences in EEG activity between neutral and sad induced mood, and between responses to new and old faces (i.e. face recognition task). PLS is a combination and extension of multiple regression and Principal Components Analysis, and for EEG data it is used to test whether there is a significant effect due to the experimental manipulation, as well as the temporal and spatial (i.e. scalp) location of the effect. PLS identifies latent components and tests their significance without restricting analysis to predetermined scalp areas or times of interest, and uses all the data in the time series while controlling for Type-1 error.

Expected effects of mood induction and face recognition were identified in induced amplitude, evoked amplitude and phase synchronisation measures in certain frequency bands (IMFs), and the temporal and spatial (scalp) location of these effects was explored. In the course of this analysis an unexpected effect was also identified during the pre-stimulus period, in the form of a significant difference in measures of phase synchronisation between New and Old faces. This effect was found in IMF5 ($p<0.001$), IMF4 ($p<0.000$) and IMF3 ($p<0.000$), which correspond to frequency bands of 3-6Hz, 6-12Hz, and 12-22Hz respectively (i.e. closely matching the theta, alpha, and beta1 bands respectively). The effect was observed within the one-second period prior to stimulus onset, and was fairly widely distributed across electrode locations. As the order of presentation of New and Old faces was pseudo-randomly determined in each trial, it is difficult to account for differences in brain activity prior to stimulus presentation by any known neurophysiological process.

Further investigation of this effect was undertaken to rule out possible artefacts. Linear filtering can distort the timing of event-related EEG components both forwards and backwards in time, depending on the direction of filtering. Low-pass filtering was not used in this study, as the EMD process itself

successively extracts high frequency noise in the first few IMFs without distorting the timing of EEG components. High-pass filtering (0.5Hz) was used to remove slow potential drift, although a 'zero phase-shift' filter was used which filters both forwards and backwards in time to cancel out any phase distortion.

A more likely source of error was later identified when a consistently smaller number of epochs was found to be associated with New compared to Old stimuli; this discrepancy may bias comparisons of epoch average measures, as disproportionately greater residual noise would be expected in an average of fewer epochs. Therefore the dataset was re-analysed with an equal number of epochs randomly sampled from each condition to ensure an equalised epoch-count for New and Old stimuli. When the same analysis as described above (EMD followed by PLS) was performed on this epoch-equalised dataset, the effect was no longer found. However, this may simply reflect the poorer signal-to-noise ratio in the equalised sample, as in order to equalise epoch-counts between conditions we necessarily had to discard a considerable number of epochs (approximately one third of the data). The fact that the main (post-stimulus) effects of mood induction and new/old face recognition were also not found in this equalised dataset supports this view. Baseline-correcting after averaging is another way to control for unequal numbers of epochs, although it is difficult to choose an appropriate baseline period for a pre-stimulus effect; using the period between -2000 to -1500ms as a baseline the pre-stimulus difference between new/old conditions remained significant, which points against the possibility that baseline problems are involved.

The only remaining possibility for an artefact we can identify is poor randomisation of the stimuli, which may have enabled participants to unconsciously identify a bias in their presentation order and thus produce differential anticipatory responses for New versus Old faces. We consider this unlikely, although we must accept it as a possibility especially as we have not been able to establish whether randomisation with replacement was used (as relevant documentation has not been retained by the experimenters). As Bierman (2000) points out, the presence of this effect implies that the common practice in psychophysiological research of using the period just prior to stimulus presentation as a baseline value may introduce bias in estimates of post-stimulus main effects (i.e. artificially diminish them). In our dataset, using the pre-stimulus period as the baseline often rendered the main post-stimulus effects non-significant. For this reason, this effect deserves careful study regardless of its nature, as it carries practical implications for psychophysiological research.

Over the past year we have been collecting data for another study with a similar design to the one presented here, which uses a high-density electrode montage (128 channels) and a protocol involving randomised inter-stimulus intervals and stimulus randomisation with replacement. As this experiment was also designed to study face recognition memory and not to investigate potential psi effects, we consider it as an unintended opportunity to examine this effect further.

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ANOMALOUS PHYSIOLOGICAL RESPONSES TO LOCAL AND REMOTE EMOTIVE STIMULATION

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INTRODUCTION: This study builds upon two existing lines of work, both showing considerable promise, that have used electrophysiological techniques to detect covertly-occurring responses of human subjects to emotionally relevant but physically remote (in space or time) stimuli. The first and older body of work (remote stimulation) has looked at autonomic (ANS) and central nervous system (CNS) responses that follow contrasting emotive stimuli presented in a spatially remote location (e.g., Dean and Nash, 1967). The second and more recent group of studies (presentiment) has examined differential CNS and ANS changes occurring in anticipation of contrasting emotive stimuli that will be chosen and presented in the immediate future at the percipient's own location (e.g., Radin, 2006). The task will include presentiment and remote stimulation trials intermixed; one run of 80 trials with a remote agent and one run of 80 trials without an agent. Target selection and display location are determined by a pseudo-random algorithm (Mersenne Twister) reinitialized for each trial. Physiological measures will include simultaneous 128 channel EEG, EOG, skin conductance, IR plethysmography, respiration and skin temperature measures. This project seeks to: 1. Investigate presentiment and remote-stimulation effects produced in the same subjects by the same stimuli and in the same experimental session. 2. Characterize ANS and CNS responses to these stimuli in unprecedented physiological detail. 3. Investigate the possible contribution of emotionally linked agents to production or modulation of response to remote stimulation Specific hypotheses for this project are: 1.There will be differential ANS and CNS responses to calm vs. emotional stimuli during a brief period prior to direct stimulus presentation (presentiment effects). 2. There will be differential ANS and CNS responses to calm vs. emotional stimuli during a brief period prior to their presentation in a secure remote location (remote presentiment effects). 3. There will be differential ANS and CNS responses to calm vs. emotional stimuli displayed in a secure remote location (remote-stimulation effects).

METHODS: Subjects/Pairs of participants will consist of related or emotionally bonded individuals (siblings: monozygotic twins if available, parent/child pairs, spousal/dating pairs). Screening: Exclusion criteria include current psychiatric/neurologic diagnoses and/or medication/recreational substances that cross the blood-brain barrier. Additional screening will include vision acuity (double Snellen chart), handedness (Edinburgh Handedness Inventory), relationship closeness (Inclusion of Other in the Self (IOS) Scale, Perception of Connectedness Spectrum (created by us), the Relationship Closeness Inventory (RCI), and history of anomalous experiences (Unusual Experiences Inventory). Task: Stimuli will consist of IAPS (International Affective Picture System) photographs. We will employ a pool of 80 photographs selected as follows: half of the presented photographs (40) will be from those rated high in arousal but contrasted in emotional valence with some positive (erotic, 20 photos in total) and the remainder negative (violent, 20 photos in total) in emotional valence; the other half (40) will be rated low in arousal and neutral in emotional valence (calm). Next, both participants will be shown the EEG booth and the upstairs agent room. In both of these locations, a sample display will be shown. However, participants will be told that there will be three types of trials: (1) images appearing directly to the percipient, (2) images appearing in the agent room and (3) images appearing in neither locale. This will ensure that the percipient will not

know, when the image does not appear to her/him directly, that it is being displayed remotely. Session Structure: 2 Runs, 80 trials each, one run with agent and one without (randomly chosen so experimenters at remote EEG booth do not know). Target selection and display location are determined by a pseudo-random algorithm (Mersenne Twister) reinitialized for each trial.
MEASURES: These will include simultaneous 128 channel EEG, EOG, skin conductance, IR plethysmography, respiration and skin temperature measures. As the main premise is to measure unconscious measures, the amount of devices used should be a barrier in eliciting such responses. Furthermore, the time allotment for the experimental phase is less than one hour. Thus, that should not be a burden to subjects either.
ANALYSIS: (1) Presentiment: average EEG epochs for each session, across trials within experimental groups- e.g. percipient-displayed trials with calm vs. positive and negative emotional valence stimuli to look for presentiment effects (refer to Radin, 2006). (2) Calculate the mean channel-by-channel amplitude within the appropriate pre-stimulus time-window. E.g., for EEG, presentiment response (Radin, 2006), we'll use the last second before the stimulus. (3) For remote stimulation, we will first examine the post-stimulus EEG averages for direct stimulus presentations to assess systematic differences in response based on stimulus types. These will provide hypotheses as to the form of differential responses to remote stimuli. We expect the relevant component(s) to appear at latencies of 300ms or more. (4) We will then extract measures of post-stimulus EEG response to the remote stimuli. In addition to any component(s) identified in step (3) [measured preferably in terms of area vs. peak height for statistical reasons], these will include mean/RMS amplitudes. We may also use ICA and/or PCA to identify response components in EEG signals. (5) Parallel steps will be taken to extract measures from the available autonomic channels- for example, skin conductance and numbers of responses, heart rate and peripheral blood volume changes, and so on. (6) Once we have all the needed measures for all participants, we can do the targeted group-level statistics using t-tests and ANOVAs for one-way analyses (e.g. calm vs. emotional or calm vs. positive vs. negative emotional valence for presentiment responses). We will also conduct more complicated/detailed univariate analyses- e.g. two-way ANOVA of response to remote stimulation with vs. without an agent. Finally, we will conduct multivariate analyses, e.g. using all of the autonomic measures of presentiment response as criteria in MANOVAs of calm vs. positive vs. negative stimuli, calm vs. arousing stimuli, etc. These are standard parametric statistical tests, but their validity can be checked (at least in the simple cases) by computationally intensive randomization/permutation tests, available in Systat and EEGLAB, which circumvent all distributional assumptions. (7) We also expect to be able to do within-subject analyses using whatever measures can be extracted on a trial-by-trial basis. This will include most or all autonomic measures (whichever prove useful) and possibly some sort of composite EEG measures capable of exploiting the across-channel redundancy of EEG responses. For all of these analyses, familywise error correction for multiple comparisons, i.e., Bonferroni and FDR (False-discovery rate), will be used.

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THE EFFECTS OF AUDIENCE SIZE: A FIELD RNG EXPERIMENT IN BALLPARKS IN JAPAN

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Recent studies using a field random-event generator (REG) and a random-number generator (RNG) have reported that field consciousness affected RNG output during large events or when news was broadcast worldwide (Nelson et al., 1998; Nelson, 2001; Radin, 2002). At the same time, however, RNG behavior remains unclear, and field consciousness can involve many psychological factors including group emotion, attention, coherence, and focus on an event. On the basis of results demonstrating that RNG outputs in movie theaters with larger audiences were associated with more biased RNG outputs (Shimizu & Ishikawa, 2010), we hypothesized that audience size would have an important effect on RNG output. However, the audience sizes of movie theaters do not vary greatly and are much smaller than those that have been used in other field RNG studies. Therefore, we designed a large-scale study that met specific conditions. First, we selected a Japanese professional baseball stadium as the field because baseball is the most popular sport in Japan. We initially selected the Tokyo Dome stadium, one of the major ballparks in the country, due its large audience capacity (a maximum of 55,000) that accommodates audiences of various sizes throughout the season. Second, to effectively detect RNG signals, we conducted many repetitive measurements of RNGs under both field and control conditions. We hypothesized that not only true random numbers but also pseudo random numbers (PRNG) could be affected with field consciousness.

Method

Experimenters attended 10 baseball games at the Tokyo Dome, the Seibu Dome, and the Chiba Marine stadiums from September 2010 to March 2011 to generate random numbers (additional venues were added because all the remaining games at the Tokyo Dome were cancelled after the earthquake in Japan). Average audience size at fields was 34084±7883.1 SD (N=10). We also generated random numbers under control conditions at Tokorozawa (Waseda University) and Musashi-Murayama fields in Tokyo. They were conducted at the same time as the baseball games. Distances from the ballpark field were recorded independently. Average distance was 30.8±22.8SD which was calculated by software application, which used information of latitude and longitude of two geometrical points, based on geocoding (http://www.geocoding.jp/). Although there were 12 (=4 *3) possible combinations of server location and ballparks, 8 patterns were actually observed.

[Instruments] We primarily used the Rpg102 and Rpg105 machines (FDK Corporation) to generate random numbers, but also relied on the Psyleron REG-1 to generate additional numbers. Rpg105 hardware can generate 32 truly independent random numbers. We used these first 32 random numbers, which were the mechanical equivalents of those generated by Rpg102. The software was re-developed to simultaneously generate two kinds of true random numbers (Rpg102 and Psyleron REG-1) and two kinds of pseudo-random numbers.

[Analysis] RNG (and PRNG) generate 512 bits 1/0 outputs per second. Then expected value of monobit counted was 256 and its expected variance was 128, from binominal distribution. Z-score of counted bits ‘x’ can be calculated as follows:

$$z_{raw} = \frac{x - 256}{\sqrt{128}}$$

Using baseball game as field event, from game start to end, z-score were accumulated,

$$Accumulated\ Chisquare = \sum_{t=1}^{n} \frac{(z_{raw} - 1)^2}{2n}$$

where n was total time of ballgame. This accumulated chi-square score was calculated in each game. Total 10 games were used in the current study.

Accumulated *chi*-square values during the entire game (from about 3 hours to 5 hours) were calculated for the dependent variables in the same way under the experimental and control conditions. All *chi*-square values were converted into *z*-scores to analyze the results, and the average *z*-scores were also calculated.

Results

The outputs of the RNGs, pseudo-random-number generators (PRNGs), and the integration of the two showed $z = -1.580$ (Mean = -0.422, $N = 14$, $p = 0.114$), $z = -1.535$ (Mean = -0.543, $N = 8$, $p = 0.125$), and $z = -2.186$ (Mean = -0.466, $N = 22$, $p = 0.029$), respectively, under the experimental condition. Under the control condition, the respective findings were $z = 1.830$ (Mean = 0.528, $N = 12$, $p = 0.067$), $z = -0.185$ (Mean = -0.041, $N = 20$, $p = 0.853$), and $z = 0.974$ (Mean = 0.172, $N = 32$, $p = 0.330$). Pearson's correlation coefficient (r) was calculated for the relationship between audience size and *z*-scores. The outputs of the RNGs, PRNGs, and their integration were as follows: $r = 0.451$ ($N = 14$, $p = 0.101$), $r = 0.341$ ($N = 8$, $p = 0.401$), and $r = 0.413$ ($N = 22$, $p = 0.056$), respectively. This data suggested that larger audience sizes were associated with more biased RNG outputs, although this association did not reach significance. And field consciousness could affect not only RNG but also PRNG at field.

The correlation between the distance from the actual playing field and the *z*-scores was calculated. The outputs of the RNGs, PRNGs, and their integration showed $r = 0.433$ ($N = 26$, $p = 0.027$), $r = 0.218$ ($N = 28$, $p = 0.265$), and $r = 0.303$ ($N = 54$, $p = 0.026$), respectively.

Discussion

Positive *r*-values were obtained in the current analysis. Although our sample was small, the results may imply the effect of audience size if this tendency were to be replicated. However, it should be noted that the effect seemed to be derived from the relative rather than the absolute size of the audience in the experiment. Strangely, distance from the field showed a significant positive effect, presumably because the outputs of the RNGs in the ballpark showed low (near-zero) *z*-scores. Future studies should explore the similarities in PRNGs and RNGs when *z*-scores are analyzed, as was demonstrated by Shimizu & Ishikawa (2010).

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ABSTRACTS

Invited Addresses

DISTORTIONS OF THE PAST

Carlos S. Alvarado, Ph.D.
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In this invited address, addressed to parapsychologists who write about aspects of the history of their field, I will focus on some problems that produce incomplete and unbalanced views of past developments in parapsychology. One cause of distorted history is the emphasis on some individuals and groups to the neglect of others. This is found in the literature that presents history as the work of well-known figures (e.g., the work of Myers and Gurney in the Society for Psychical Research without mention of other workers) and that relies only on English-language materials. History is distorted when we limit our focus too much, forgetting we are dealing merely with a segment of the historical record.

Another general problem is when the past is seen in terms of its relation to the present forgetting ideas that are not popular or undesirable today. Such emphasis may have relevance to us now as parapsychologists, but tends to present an incomplete and unrealistic account of the past. This is also the case when we organize the past in specific phases or stages, and when we emphasize progressive aspects of the field. The latter implies the neglect of the history of the rejection of the field by science, and the work of critics. For example, while most parapsychologists mention the pioneering work of the Society for Psychical Research and of J.B. Rhine, few pay much attention to the critical writings of Joseph Jastrow and of so many other critics that also contributed to the development of psychical research.

Much can be learned from the approaches to the study of the past by trained historians, who have expanded the range of individuals in their studies, and generally present a more contextualized approach in which history is not seen solely through the eyes of current interests and needs, as is generally the case in the history written by scientists (this is not to say that professional historians are not affected by specific agendas, some of which may be of contemporary development). A consideration of these issues will give us a more rounded view of past developments in parapsychology than the truncated versions generally presented by students of psychic phenomena.

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PSI PHENOMENA IN THE REAL WORLD

John B. Alexander, Ph.D.

While parapsychologists tend to examine psi in the laboratory there are many people who experience paranormal events in their daily lives. This presentation will address our explorations around the world and examine those who apply psi phenomena for practical purposes. Studies and application of areas such as remote viewing, near-death experiences, and even some UFO observations will be discussed, as will our interactions with shamans around the world. Noted is that while scientists debated the possibility of capabilities such as remote viewing, the U.S. Army had developed an operational capability.

Of prime importance to acceptance of applied psi phenomena are critical differences in the world view of various societies. Certainly the secular perspective of some technologically developed countries inhibits the general acceptance of capabilities that could prove useful. However, such applications often lead to commercialism. Gross exaggeration of capabilities and even fraud has proven detrimental to those interested in understanding the underlying scientific principles.

Also addressed will be extremely unusual events, such as those witnessed at a location now known as Skinwalker Ranch and the implications they have for studying such phenomena. The reality of the events is undeniable, yet most attempts at studying them scientifically are frustrated as if by design.

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ALTERED CONCIOUSNESS IS A MANY SPLENDORED THING

Etzel Cardeña
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Living in a monophasic society that values our ordinary state of consciousness and rationality to the exclusion of other states, the most familiar path is to assume that alterations of that state are nothing other than psychophysiological aberrations or dysfunctions, pursued by misguided individuals. In this presentation I will challenge the notion that altered states of consciousness (ASC) by definition create delusional beliefs about oneself and the world, and discuss evidence from various disciplines showing that altering consciousness is part of our nature and can serve to 1) make small adjustments so we can be more effective at our tasks, 2) obtain greater pleasure than we can achieve ordinarily, 3) offer nonfactual possibilities that may be actualized through creative ways, 4) enhancing healing possibilities for specific ailments and/or enhance the sense of meaningfulness in life, and 5) to obtain alternate epistemological routes to comprehend better ourselves and the universe at large.

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EVOLVED PSYCHOLOGY AND THE DEEP STRUCTURE OF PSI: THE SHAMANIC PARADIGM

Michael Winkelman
Banquet address

The direct relationship of psi to magico-religious practice has been long noted and perhaps obvious, but what aspects of magico-religious practice are most relevant? A cross-cultural study of magico-religious practitioners provides an understanding of universals and guidelines for investigations. One notable and ancient aspect of magico-religious practices involves shamanism. The relationship of shamanic universals to human biology provides a context for considerations of evolutionary origins of both religion and psi capacities. This approach identifies three areas of evolutionary advantages: group coordination, the information capacities of altered states of consciousness, and assumptions about spirits. These three pillars of shamanism are examined in terms of their evolutionary sources and advantages in order to identify the contexts in which psi capacities may have co-evolved with other human capacities.

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PSI RESEARCH IN BRAZIL: NEW HORIZONS

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Brazil is a rich country culturally. In this context of cultural richness and profound social contrasts, psi research was established. The origins and vicissitudes by which psi research has gone through in Brazil have not always distinguished it from religion, alternative healing practices, superstition, and charlatanism, mainly because of the cultural complexity in which we live in the country. Despite many difficulties, psi research is advancing in Brazil. In this address, I focus on academic conquests, especially the development of research projects, master's theses, and PhD dissertations in some of the most important universities of Brazil. Other important advances include the creation of university centers for the study of psi, such as the Inter Psi - Anomalistic Psychology and Psychosocial Processes Laboratory at the Institute for Psychology at University of Sao Paulo. University of Sao Paulo is the most important public university in Brazil, and one of the most productive in Latin America. It's important to mention that several foreign researchers have been instrumental in improving psi research in Brazil and Latin America. The exchange of information with them has helped to overcome the language and cultural barriers in the field and has created good prospects for the future.

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Facinter Centre
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Brazil
August 18-21, 2011
Program Chair: Marios Kittenis, Ph.D.
Local Host/Arrangements Chair: Fábio Eduardo da Silva, MSc.

List of Delegates

John B. Alexander - USA
Carlos S. Alvarado - USA
Mary-Jane C. Anderson - Scotland
Juliana Gonçalves Blaser - Brazil
Etzel Cardeña - Sweden
Vanessa Corredato - Brazil
Fábio Eduardo da Silva - Brazil
Maciel Santos da Silva - Brazil
Vera Cintra da Silva - Brazil
Hoyt Edge - USA
Bruno Fantoni - Brazil
Maria de Fátima Fernandes - Brazil
Ede Frecska - Hungary
Patric Giesler - USA
Joan H. Hageman - USA
Erlendur Haraldsson - Iceland
Adrian Hernandez - USA
Glenn Hitchmann - England
James Lewis - England
Drew Littlebury - England
Luis Eduardo Luna - Finland
Marios Kittenis - Scotland
Hideyuki Kokubo - Japan
Danielle J. Kradin - USA
Stanley Krippner - USA
Fernanda Loureiro Goulart - Brazil
David Luke - England
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